

DATE: MARCH 24, 2008 SITE ID # -

TO: COOPERATIVE PRECIPITATION OBSERVERS

FROM: DANIEL BROTHERS, ENVIRONMENTAL SCIENTIST

SUBJECT: REPORTING PROCEDURES

I would like to take this opportunity to thank you for volunteering your time to the 2008 Atmospheric Resource Board Cooperative Observer Network. We greatly appreciate your participation! The information you collect will be used not only by the Atmospheric Resource Board (ARB), but by the National Weather Service, State Water Commission, and several other organizations. Accurate reporting of rain and hail events will help us maintain one of the best precipitation data networks in the nation.

The following instructions will help maintain uniformity in reporting. **Please take a few minutes to read through all the instructions. Please keep this memo and the enclosed yellow instruction card, so that you may refer to them throughout the coming season.**

INSTRUCTIONS

In your packet, there should be six white reporting cards, one for each month, beginning with **April and running through September**. If you signed up for internet reporting, you did not receive any reporting cards. These cards are postage-paid, so no stamps are required. If rates change, or if postage is missing, mail the card anyway. We'll pay any postage due. In addition, you have been supplied a rain gauge to make the daily measurements. These gauges are fairly resilient, but do crack, break, or become unreadable after extended use for any number of reasons. Please contact us as quickly as possible at **1-800-654-5981** if you need a new gauge. If you have recently requested a new gauge or you are a new observer your gauge should arrive shortly. If you do not receive a gauge before March 28 please contact us using the "800" number. Internet accounts have been set up for every observer, so if you want to try out internet reporting, you can do so at any time. Internet reporting instructions are located on pages 4 and 5 of this letter.

1. MONTH. At the beginning of each month, enter the month (and year, if you wish) on the card. When you begin a new month, mail the completed card for the previous month. The cards are entered each month and then a map is generated from the data. All the maps generated are on the ARB website for your viewing at www.swc.nd.gov/arb. Begin recording in April, and end after September.
2. TIME OF OBSERVATION. Read your gauge each morning, as near to 8:00 a.m. as it is convenient for you. [Note that typically, the reading taken will include rain that fell the previous day. This is expected and accounted for. **Please enter each reading on the day it was made.**]

If it is raining when you make your morning observation, record the amount of precipitation received and empty the gauge. Any rainfall received after your 8:00 a.m. daily reading each morning will be recorded the next morning.

3. READING THE GAUGE. As illustrated on the enclosed example, the Tru-Check gauge has a graduated scale. For example, half an inch should be reported as .50, while three-hundredths should be reported as .03. Refer to the enclosed diagram if you are uncertain how to read the gauge.

If no rain water is in your gauge at your daily 8:00 a.m. reading, report 0; otherwise, report the exact amount of rain water in the rain gauge. Record a "T" for Trace when there is less than one one-hundredth of an inch of rainfall.

MISSING DATA. If you miss a reading, please enter "M" for each day missed. If there is water in the gauge after a missed reading, please disregard the amount and dispose of it as you won't be sure on which day it fell. Please record an "M" on the days missed. Do not report cumulative amounts.

To get a proper reading for April 1, your gauge must be in place by 8:00 a.m. March 31. This means, your April 1 reading might include rainfall that fell after 8:00 a.m. March 31.

4. SNOW. The gauge is not designed to catch snow, and does a poor job of it. Do not attempt to melt snow, or put anti-freeze in the gauge. **Bring your gauge inside during snowy periods, and enter "M" for those days.** [NOTE: If rain freezes in the gauge it will break, so if freezing temperatures are expected, please take your rain gauge inside and enter "M" for as many days as necessary.]

5. HAIL. If hail falls at your location, refer to the yellow card and complete the hail section on the white reporting card. **Please note that hail occurrence time should be reported in either 24 hour clock format (1 p.m. = 1300, 11 p.m. = 2300) or, if it is more convenient specify a.m. or p.m. by circling the appropriate one on the card.** Any extra information (remarks) about the hail events, are most helpful and aids the study of North Dakota's climate. If applicable, please indicate the percentage of crop loss in the remarks section.
6. LOCATION OF RAIN GAUGE. **Please do not use any rain gauge other than the Tru-Check rain gauge that the ARB has provided. Your location and gauge ID (or observer ID) appear at the top of the mailing label. For example,** the numbers "16310430 Your Name 58" would indicate the location of your gauge and ID. The numbers correspond as follows, 163 indicates the township, 104 indicates the range, 30 indicates the section, and 58 would indicate your gauge ID. Please notify us **if the numbers on your label are incorrect**. If you must move your rain gauge, please notify us as soon as possible of the new location. A new gauge number will likely then be issued if the township, range, or section has changed. ***Please make sure that the township, range, and section shown on the mailing label are correct. IT IS EXTREMELY IMPORTANT. The numbers are the method used in plotting your precipitation on the map. If it is wrong, your reports won't correspond to the correct location.***
7. SITING OF YOUR RAIN GAUGE. The best site for your Tru-Check gauge is on a fence post at least 50 feet from the nearest building or tree. Other areas may be acceptable; please refer to the pamphlet enclosed with the gauge.
8. PERSONAL RAINFALL RECORDING. A separate sheet is enclosed for you to record rainfall and keep for your own reference.
9. ADDING THE MONTHLY TOTAL. Please add the monthly total and enter it in the location shown. **If there were any missing days, just put an "M" for the monthly total.** This saves time in the processing of the cards and makes the data accessible faster.
10. REPORTING OF SEVERE EVENTS. The National Weather Service (NWS) has requested that you report immediately all occurrences of severe weather, or heavy rainfall exceeding one inch. A letter from the NWS is enclosed which explains the procedures for making these reports, and includes a toll-free telephone number for their **Bismarck and Grand Forks offices**. **The Atmospheric Resource Board does not issue severe weather warnings; that is done only by the NWS.**

INTERNET REPORTING

An account has been created for each observer on the ARB website at www.swc.nd.gov/precip.phtml. You can access your account and report precipitation at any time. If you signed up for internet reporting, you did not receive reporting cards. If you didn't sign up for internet reporting, but you would like to try it out an account is already set up for you and you can try it at any time. If you have reporting cards we do ask that you still report on the cards provided and mail them to the ARB office so we can verify the amounts reported online.

1. **LOG IN.** Once you reach the login page at the above website you will need to enter your Site ID and password. Your Site ID is the number located at the top of Page 1 of this letter. The first time you log in your password will be your Site ID number followed by your five digit zip code with no spaces in between. For example, if your Site ID is 65 and your zip code is 58505, then your password would be 6558505. After these have been entered you can either hit enter or click on the **Log In** button. If you reported on the Internet last year, your password has **not** been reset to the default password for your Site ID. Please call the ARB if you need to find out your password. If your session lasts several minutes your session may "time out" in which case you will be returned to the log in page and have to log in again. All the data you have already entered should appear in the appropriate locations if it was previously saved.
2. **CHANGING YOUR PASSWORD.** If you would like to change your password to something that would be easier to remember you can click on the **Change Password** button located next to the **Log Off** button after you log in. You will be prompted to enter your old password, which is the one you used to log in. You will then need to enter a new password and verify that new password by typing it again. Your new password can be any combination of letters, numbers, and symbols provided that it is a minimum of **four** characters and a maximum of **twenty** characters. The password is also case sensitive so be aware of capital and lowercase letters when you enter your new password. After you have entered your new password click on the **Change** button and you will be returned to the precipitation reporting page. If your password was changed successfully a dialog box saying *Password successfully changed* will appear.
3. **REPORTING RAINFALL.** Once you have logged in you should come to a page that is set up similar to the reporting cards. Your name should appear at the top next to the **View/Report Hail** button. To the

right of your name is a drop down menu for selecting the month for which you are reporting followed by the year. In the upper right corner next to the year is a bold number that should correspond to your Site ID. To report rainfall first make sure the month selected is correct and then simply put the amount of rain next to the corresponding day of the month to the nearest hundredth of an inch. For example, $\frac{1}{2}$ inch of rain would be reported as 0.50. As you enter precipitation the total for the month should automatically update. Please enter 0 for any day that no precipitation is received rather than leaving the space blank. This way ARB personnel know the day has been entered rather than missing. Any pertinent remarks such as high wind, excessive flooding, or tornadoes can be entered in the *Add Remarks* section at the bottom of the page. When all the information is entered, check to make sure it is accurate and click the **Save** button. Once the data has been saved it cannot be changed except by ARB staff. All previously entered information will appear when you log in.

4. REPORTING HAIL. To report any hail information click on the **View/Report Hail** button in the top left corner of the page. Make sure the month shown is correct and click on the **Add Hail Report** button. You will then have to enter the day of the month in which the event took place, the time the event started and stopped including am or pm, the size of the hail, and the amount of damage received in the appropriate spaces on the page. Any additional remarks on the hail event can be entered in the space provided at the bottom of the page. When all the information is entered, check to make sure it is accurate and click the **Save** button. Once the data has been saved it cannot be changed except by ARB staff.
5. LOG OUT. When you have finished entering your information click on the **Log Off** button and you will return to the log in page. If any information, such as your name or Site ID, are incorrect or you encounter difficulties in logging in or reporting data please contact the ARB as soon as possible by phone at **1-800-654-5981** or by e-mail at dabrothers@nd.gov.

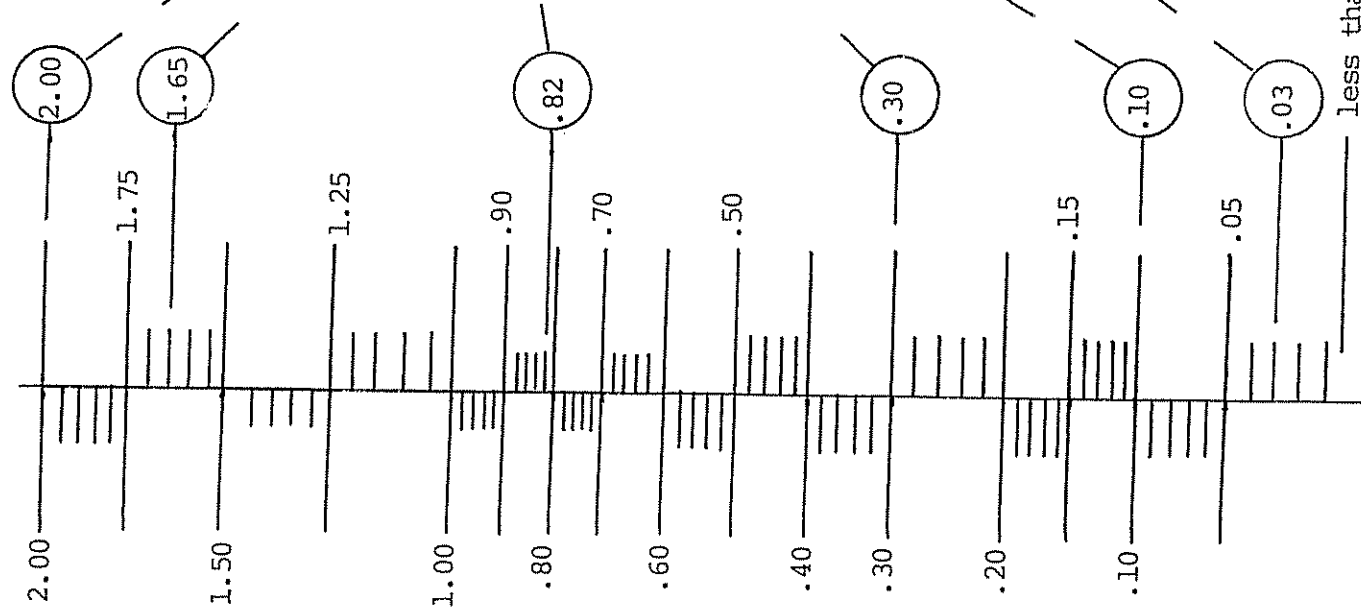
Please follow all of the reporting guidelines in this memo to maintain the accuracy of the data collected. If you have any questions or problems, feel free to call us at the ARB's toll-free number, **1-800-654-5981**. Again, please note that this "800" number is different from the NWS toll-free numbers. Thanks for your help!

SCALE DIVISION

RAINGAUGE READINGS IN HUNDREDTHS OF AN INCH

SAMPLE OF RAINFALL REPORTING CARD

SCALE DIVISION VALUE = .05



SCALE DIVISION VALUE = .02

SCALE DIVISION VALUE = .01

PLEASE WRITE
MONTH IN SPACE
AS SHOWN BELOW



REPORTING CARD

MONTH: MAY

DATE	RAIN	DATE	RAIN	DATE	RAIN
1	2.00	9	0	17	0
2	1.65	10	0	18	0
3	1.82	11	0	19	0
4	0	12	0.03	20	0
5	0.30	13	0	21	0
6	0.10	14	0	22	0
7	0	15	0	23	0
8	0	16	0	24	0

4.90 Total

REMARKS:

DAYS WITH HAIL

DATE	START	END	DAMAGE	SIZE
				S-
				S-
				S-
				S-

SEE INSTRUCTION CARD FOR COMPLETE INFORMATION ON HOW TO FILL OUT REPORTING CARD
SFN 7350

less than .01